



Republic of the Philippines
DEPARTMENT OF EDUCATION



K to 12 BASIC EDUCATION CURRICULUM

TECHNOLOGY AND LIVELIHOOD EDUCATION

CURRICULUM GUIDE

Exploratory Course on

RAC SERVICING (DOM RAC)

K to 12 TECHNOLOGY AND LIVELIHOOD EDUCATION

**INDUSTRIAL ARTS – RAC SERVICING (DOM RAC)
(Exploratory)**

Curriculum Guide for the Exploratory Course on RAC Servicing (Dom RAC)

For you to get a complete picture of the complete TLE exploratory course on RAC Servicing (Dom RAC), you are hereby provided with the Curriculum Guide on RAC Servicing (Dom RAC).

Content Standard	Performance Standard	Learning Competencies	Projects/Activities	Assessment	Duration
LESSON 1: PREPARE MATERIALS AND TOOLS					
<ul style="list-style-type: none"> • Use of copper tube in Refrigeration and Air-conditioning Unit • Types of Copper Tubes and tubing • Fitting • Common flare type fittings • Filter Drier • Flare nut • Relay • Different Refrigeration and air conditioning tools 	<ul style="list-style-type: none"> • Job requirements is identified • HVAC materials and tools are identified • Quantity of each material to be use is determined or specified • Correct quantity and quality of materials are determined as per job requirement 	LO1. Identify materials and tools	<p>Making Clip Arts or Album of Materials, Tools and Equipment</p> <p>Identification of different tools and instruments in Domestic refrigeration</p>	<ul style="list-style-type: none"> • Written Test • Performance test 	4Hrs
<ul style="list-style-type: none"> • Preparing Service Report • Part of a service 	<ul style="list-style-type: none"> • Refrigeration materials needed are 	LO2. Request Materials And Tools	Research Work on Procedure on How to Request of Tools	<ul style="list-style-type: none"> • Written Test • Performance 	4Hr

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<p>report</p> <ul style="list-style-type: none"> • Preparing Job Report Form • Preparing Requisition form/slip 	<p>requested according to list prepared.</p> <ul style="list-style-type: none"> • Requisition form / slip is accomplished accurately and properly. • Request is done as per company standard operating procedure. 		<p>Accomplishing job order and requisition form/slip</p>	<p>ce test</p>	
LESSON 2: PERFORM MENSURATION AND CALCULATIONS					
<ul style="list-style-type: none"> • Types of measuring instruments • How to use multi tester Units Of conversion • Conversion of Temperatures • Heat Load Calculation 	<ul style="list-style-type: none"> • Object or component to be measured is identified, classified and interpreted to the appropriate regular geometric shape. • Measuring tools are selected/identified as per object to be measured or job 	<p>LO1. Select Measuring Instruments</p>	<p>Perform actual mensuration of a given object</p> <p>Reading of graduations in metric rule.</p> <p>Perform how to use a multi tester</p>	<ul style="list-style-type: none"> • Written Test • Performance test 	<p>4 Hrs</p>

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	<ul style="list-style-type: none"> requirements. • Work pieces are measured according to job requirements. 				
<ul style="list-style-type: none"> • Linear measurements • Mathematical conversion table • Weight conversion table • Unit of measure And their equivalent • Temperature measurement and conversion 	<ul style="list-style-type: none"> • Accurate measurements are obtained according to job requirements. • Instruments are read to the limit of accuracy of the tool. • Work pieces are measured according to job requirements. 	LO2. Carry out measurements and calculations	<p>Perform mensuration and calculation</p> <p>Perform mathematical conversion and temperature conversion</p>		4 Hrs
LESSON 3: INTERPRET TECHNICAL DRAWINGS AND PLANS					
<ul style="list-style-type: none"> • Common Refrigeration electrical symbols and signs • Wiring diagram of water cooler 	<ul style="list-style-type: none"> • Sign, symbols and data are determined according to classification or as appropriate in drawing. 	LO1. Analyze signs, symbols and data	Making Schematic Diagram, Pictorial Drawing used in RAC.	<ul style="list-style-type: none"> • Written Test • Performance test 	4Hrs

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<ul style="list-style-type: none"> • Blueprint • Sample of blueprint plan for electrical installation 	<ul style="list-style-type: none"> • Components, assemblies or object are recognized as per job requirement. • Dimensions and specification are identified according to job requirements. 	<p>LO2. Interpret work plans</p>		<ul style="list-style-type: none"> • Written Test • Performance test 	<p>3Hrs</p>
<p>LESSON 4: MAINTAIN TOOLS AND EQUIPMENT</p>					
<ul style="list-style-type: none"> • Classification of Tools <ul style="list-style-type: none"> • Functional and • Non functional tools • Checking condition of tool • Record Cards • Inspection of tools 	<ul style="list-style-type: none"> • Tools and equipment are maintained • Non-functional tools and equipment are segregated and labeled. • Non-functional tools are stored prior for repair. • Safe handling of tools and equipment are 	<p>LO1. Check the condition of tools and components</p>	<p>Identification of functional and non-functional tools and equipment</p>	<ul style="list-style-type: none"> • Written Test • Performance test 	<p>3Hrs</p>

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	<p>applied.</p> <ul style="list-style-type: none"> • Safe working habits are observed. 				
<ul style="list-style-type: none"> • Classification of lubricants • Purpose of lubricating • Accomplish inventory of HVAC/R equipment, tools and instrument types and specifications • Lubrication procedures 	<ul style="list-style-type: none"> • Appropriate lubricants are identified according to types of equipment. • Lubricated hand tools are properly stored. • Inventory of tools, instruments and equipment are conducted and recorded. • Defective hand tools, instruments, equipment and accessories are replaced according to manufacturer’s specification. • Proper 	<p>LO2. Perform basic preventive maintenance</p>	<p>Marking or labeling the storage area of tools and materials.</p> <p>Applying oil/lubricants in different tools</p>	<ul style="list-style-type: none"> • Written Test • Performance test 	<p>4Hrs</p>

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	housekeeping is applied				
LESSON 5: PERFORM HOUSEKEEPING AND SAFETY PRACTICES					
<ul style="list-style-type: none"> • 5 S methodology • Procedure in arranging and storing tools and equipment • Preventive Measures from exposure to workplace accident and condition • First Aid in the workplace • Protection against fire • Fire scape planning 	<ul style="list-style-type: none"> • Materials, tools and equipment are classified according to their kind. • Appropriate areas for materials, tools and equipment are designated. • 	LO1.Sort materials, tools and equipment	Classifying of tools, equipment, and materials. Apply preventive measures Apply first aid in the workplace Study and practice use of fire extinguisher4	<ul style="list-style-type: none"> • Written Test • Performance test 	3Hr
<ul style="list-style-type: none"> • Work area housekeeping • Preventive maintenance task 	<ul style="list-style-type: none"> • Cleaning materials are identified according to specified application and 	LO2.Clean workplace area, materials, tools	Perform cleaning in specific workplace area	<ul style="list-style-type: none"> • Written examination 	3Hr

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<ul style="list-style-type: none"> • Procedures in cleaning workplace area, tools and equipment. • Consideration of a safe workplace area, tools and equipment. 	<p>procedures</p> <ul style="list-style-type: none"> • Workplace area, tools, materials and equipment are cleaned using specified cleaning materials. • Workplaces are in safe condition in accordance with safety regulation practices. 	<p>and equipment.</p>			
<ul style="list-style-type: none"> • Proper storage of tools and equipment • Maintenance and safety storage of tools and equipment • Different forms and equipment management • Procedure in borrowing tools and 	<ul style="list-style-type: none"> • System for requesting, borrowing and returning of materials, tools, and equipment is followed and implemented. • Form used is completely filled-up and filed. • Borrowed tools 	<p>LO3. Systematize dispensing and retrieval of materials, tools and equipment</p>	<p>Perform proper dispensing and retrieval of tools and equipment</p> <p>Follow suggested flow chart in borrowing and tools and equipment</p>	<ul style="list-style-type: none"> • Written examination 	<p>4Hrs</p>

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equipment • Flow chart in returning the borrowed tools and equipment. (Diagram)	and equipment are returned to designated area. • Materials are consumed as requested.				
					40 Hours

“By three methods we may learn wisdom: First, by reflection, which is noblest; second, by imitation, which is easiest; and third by experience, which is the bitterest.”

- Confucius